

Section 1. Registration Information

Source Identification

Facility Name:	Infineum USA L.P. Bayway Chemical Plant
Parent Company #1 Name:	Exxon Mobil Corporation
Parent Company #2 Name:	Shell Petroleum Company

Submission and Acceptance

Submission Type:	Re-submission
Subsequent RMP Submission Reason:	Voluntary update (not described by any of the above reasons)
Description:	US EPA Re-Submission 2004
Receipt Date:	05-Apr-2022
Postmark Date:	05-Apr-2022
Next Due Date:	05-Apr-2027
Completeness Check Date:	05-Apr-2022
Complete RMP:	Yes
De-Registration / Closed Reason:	
De-Registration / Closed Reason Other Text:	
De-Registered / Closed Date:	
De-Registered / Closed Effective Date:	
Certification Received:	Yes

Facility Identification

EPA Facility Identifier:	1000 0007 3378
Other EPA Systems Facility ID:	NJR000026690
Facility Registry System ID:	

Dun and Bradstreet Numbers (DUNS)

Facility DUNS:	32105889
Parent Company #1 DUNS:	1213214
Parent Company #2 DUNS:	131489817

Facility Location Address

Street 1:	Park Ave.
Street 2:	Brunswick Ave.
City:	Linden
State:	NEW JERSEY
ZIP:	07036
ZIP4:	
County:	UNION

Facility Latitude and Longitude

Latitude (decimal):	40.639076
Longitude (decimal):	-074.217375
Lat/Long Method:	Interpolation - Photo
Lat/Long Description:	Plant Entrance (General)
Horizontal Accuracy Measure:	25
Horizontal Reference Datum Name:	North American Datum of 1983

Source Map Scale Number:

24000

Owner or Operator

Operator Name:

Infineum USA L.P.

Operator Phone:

(908) 474-0100

Mailing Address

Operator Street 1:

P.O. Box 23

Operator Street 2:

Operator City:

Linden

Operator State:

NEW JERSEY

Operator ZIP:

07036

Operator ZIP4:

Operator Foreign State or Province:

Operator Foreign ZIP:

Operator Foreign Country:

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person:

M. Aedo

RMP Title of Person or Position:

HSSE Manager

RMP E-mail Address:

Monica.Aedo@Infineum.com

Emergency Contact

Emergency Contact Name:

Matthew Logan

Emergency Contact Title:

Bayway Chemical Shift Team Leader

Emergency Contact Phone:

(908) 474-2267

Emergency Contact 24-Hour Phone:

(908) 474-7230

Emergency Contact Ext. or PIN:

Emergency Contact E-mail Address:

Matthew.Logan@Infineum.com

Other Points of Contact

Facility or Parent Company E-mail Address:

Matthew.Logan@Infineum.com

Facility Public Contact Phone:

Facility or Parent Company WWW Homepage Address:

<http://www.infineum.com>

Local Emergency Planning Committee

LEPC:

Linden City OEM

Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site:

232

FTE Claimed as CBI:

Covered By

OSHA PSM :

Yes

EPCRA 302 :

Yes

CAA Title V:	Yes
Air Operating Permit ID:	41767

OSHA Ranking

OSHA Star or Merit Ranking:

Last Safety Inspection

Last Safety Inspection (By an External Agency) Date:	24-Sep-2021
Last Safety Inspection Performed By an External Agency:	State environmental agency

Predictive Filing

Did this RMP involve predictive filing?:

Preparer Information

Preparer Name:
Preparer Phone:
Preparer Street 1:
Preparer Street 2:
Preparer City:
Preparer State:
Preparer ZIP:
Preparer ZIP4:
Preparer Foreign State:
Preparer Foreign Country:
Preparer Foreign ZIP:

Confidential Business Information (CBI)

CBI Claimed:
Substantiation Provided:
Unsanitized RMP Provided:

Reportable Accidents

Reportable Accidents:	See Section 6. Accident History below to determine if there were any accidents reported for this RMP.
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Process Chemicals

Process ID:	1000124388
Description:	Dispersants
Process Chemical ID:	1000155411
Program Level:	Program Level 3 process
Chemical Name:	Chlorine
CAS Number:	7782-50-5
Quantity (lbs):	1100000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000124388
Description:	Dispersants
Process Chemical ID:	1000155416
Program Level:	Program Level 3 process
Chemical Name:	Hydrogen chloride (anhydrous) [Hydrochloric acid]
CAS Number:	7647-01-0
Quantity (lbs):	5300
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000124389
Description:	Vistanex J
Process Chemical ID:	1000155412
Program Level:	Program Level 3 process
Chemical Name:	Hydrogen chloride (anhydrous) [Hydrochloric acid]
CAS Number:	7647-01-0
Quantity (lbs):	42000
CBI Claimed:	
Flammable/Toxic:	Toxic

Process ID:	1000124389
Description:	Vistanex J
Process Chemical ID:	1000155413
Program Level:	Program Level 3 process
Chemical Name:	Flammable Mixture
CAS Number:	00-11-11
Quantity (lbs):	360000
CBI Claimed:	
Flammable/Toxic:	Flammable

Flammable Mixture Chemical Components

Flammable Mixture Chemical ID:	1000137189
Chemical Name:	2-Methylpropene [1-Propene, 2-methyl-]
CAS Number:	115-11-7
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000137190
Chemical Name:	Isobutane [Propane, 2-methyl]
CAS Number:	75-28-5
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000137191
Chemical Name:	2-Butene-trans [2-Butene, (E)]
CAS Number:	624-64-6
Flammable/Toxic:	Flammable

Flammable Mixture Chemical ID:	1000137192
Chemical Name:	2-Butene-cis
CAS Number:	590-18-1

Flammable/Toxic: Flammable

Flammable Mixture Chemical ID: 1000137193

Chemical Name: 1-Butene

CAS Number: 106-98-9

Flammable/Toxic: Flammable

Flammable Mixture Chemical ID: 1000137194

Chemical Name: Butane

CAS Number: 106-97-8

Flammable/Toxic: Flammable

Process ID: 1000124389

Description: Vistanex J

Process Chemical ID: 1000155414

Program Level: Program Level 3 process

Chemical Name: Ammonia (anhydrous)

CAS Number: 7664-41-7

Quantity (lbs): 53000

CBI Claimed:

Flammable/Toxic: Toxic

Process ID: 1000124390

Description: LOFI

Process Chemical ID: 1000155415

Program Level: Program Level 3 process

Chemical Name: Vinyl acetate monomer [Acetic acid ethenyl ester]

CAS Number: 108-05-4

Quantity (lbs): 150000

CBI Claimed:

Flammable/Toxic: Toxic

Process NAICS

Process ID: 1000124388

Process NAICS ID: 1000125803

Program Level: Program Level 3 process

NAICS Code: 325998

NAICS Description: All Other Miscellaneous Chemical Product and Preparation Manufacturing

Process ID: 1000124389

Process NAICS ID: 1000125804

Program Level: Program Level 3 process

NAICS Code: 325998

NAICS Description: All Other Miscellaneous Chemical Product and Preparation Manufacturing

Process ID: 1000124390

Process NAICS ID:	1000125805
Program Level:	Program Level 3 process
NAICS Code:	325998
NAICS Description:	All Other Miscellaneous Chemical Product and Preparation Manufacturing

Section 2. Toxics: Worst Case

Toxic Worst ID: 1000100880

Percent Weight:	100.0
Physical State:	Liquid
Model Used:	EPA's RMP Guidance for Waste Water Treatment Plants Reference Tables or Equations
Release Duration (mins):	10
Wind Speed (m/sec):	1.5
Atmospheric Stability Class:	F
Topography:	Urban

Passive Mitigation Considered

- Dikes:
- Enclosures:
- Berms:
- Drains:
- Sumps:
- Other Type:

Section 3. Toxics: Alternative Release

Toxic Alter ID: 1000107032

Percent Weight:	100.0
Physical State:	Gas
Model Used:	PHAST ver. 8.61
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

- Dikes:
- Enclosures:
- Berms:
- Drains:
- Sumps:
- Other Type:

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	
Emergency Shutdown:	Yes
Other Type:	Firewater Sprays

Toxic Alter ID: 1000107033

Percent Weight:	100.0
Physical State:	Gas liquified by pressure
Model Used:	DNV PHAST ver 8.61
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

- Dikes:
- Enclosures:
- Berms:
- Drains:
- Sumps:
- Other Type:

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	Yes
Flares:	
Scrubbers:	

Emergency Shutdown:	Yes
Other Type:	Firewater Sprays

Toxic Alter ID: 1000107034

Percent Weight:	100.0
Physical State:	Gas liquified by pressure
Model Used:	DNV PHAST ver. 8.61
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	Yes
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	
Scrubbers:	Yes
Emergency Shutdown:	Yes
Other Type:	Firewater sprays

Toxic Alter ID: 1000107035

Percent Weight:	100.0
Physical State:	Liquid
Model Used:	DNV PHAST ver 8.61
Wind Speed (m/sec):	3.0
Atmospheric Stability Class:	D
Topography:	Urban

Passive Mitigation Considered

Dikes:	
Enclosures:	
Berms:	
Drains:	
Sumps:	
Other Type:	

Active Mitigation Considered

Sprinkler System:	
Deluge System:	
Water Curtain:	
Neutralization:	
Excess Flow Valve:	
Flares:	

Scrubbers:
Emergency Shutdown:
Other Type: Pump Shutoff after detection by Operator due to extended time to fill reactor.

Toxic Alter ID: 1000107036

Percent Weight: 100.0
Physical State: Gas
Model Used: PHAST ver. 8.61
Wind Speed (m/sec): 3.0
Atmospheric Stability Class: D
Topography: Urban

Passive Mitigation Considered

Dikes:
Enclosures:
Berms:
Drains:
Sumps:
Other Type:

Active Mitigation Considered

Sprinkler System:
Deluge System:
Water Curtain:
Neutralization:
Excess Flow Valve:
Flares:
Scrubbers:
Emergency Shutdown:
Other Type: Fire monitors/water sprays

Section 4. Flammables: Worst Case

Flammable Worst ID: 1000076384

Model Used:	PHAST ver. 8.61
Endpoint used:	1 PSI

Passive Mitigation Considered

Blast Walls:
Other Type:

Section 5. Flammables: Alternative Release

Flammable Alter ID: 1000071559

Model Used: DNV PHAST ver 8.61

Passive Mitigation Considered

- Dikes:
- Fire Walls:
- Blast Walls:
- Enclosures:
- Other Type:

Active Mitigation Considered

- Sprinkler System:
- Deluge System:
- Water Curtain:
- Excess Flow Valve:
- Other Type: Area hydrocarbon detectors

Section 6. Accident History

No records found.

Section 7. Program Level 3

Description

Dispersant. Two EPA listed substances are contained in this Unit, chlorine (used) and hydrogen chloride (generated). There is a chlorine delivery system and a production system but the entire process is considered as a single Unit and undergoes a PHA as such. Chlorine is the only EPA listed chemical that could have an off-site impact.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000134231
Chemical Name:	Hydrogen chloride (anhydrous) [Hydrochloric acid]
Flammable/Toxic:	Toxic
CAS Number:	7647-01-0

Process ID:	1000124388
Description:	Dispersants
Prevention Program Level 3 ID:	1000107190
NAICS Code:	325998

Prevention Program Chemical ID:	1000134230
Chemical Name:	Chlorine
Flammable/Toxic:	Toxic
CAS Number:	7782-50-5

Process ID:	1000124388
Description:	Dispersants
Prevention Program Level 3 ID:	1000107190
NAICS Code:	325998

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	19-Dec-2019
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Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	19-Dec-2019
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The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	09-Aug-2023

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	Yes
Overfilling:	Yes
Contamination:	Yes
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	
Floods (Flood Plain):	
Tornado:	
Hurricanes:	
Other Major Hazard Identified:	

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	Yes
Flares:	
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	Yes
Grounding Equipment:	
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	Yes
Quench System:	
Purge System:	
None:	
Other Process Control in Use:	

Mitigation Systems in Use

Sprinkler System:	
Dikes:	
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	Yes
Enclosure:	
Neutralization:	Yes
None:	

Other Mitigation System in Use:

Fire Monitors for water spray/curtain

Monitoring/Detection Systems in Use

Process Area Detectors: Yes

Perimeter Monitors: Yes

None:

Other Monitoring/Detection System in Use:

Changes Since Last PHA Update

Reduction in Chemical Inventory:

Increase in Chemical Inventory: Yes

Change Process Parameters: Yes

Installation of Process Controls: Yes

Installation of Process Detection Systems: Yes

Installation of Perimeter Monitoring Systems:

Installation of Mitigation Systems: Yes

None Recommended:

None:

Other Changes Since Last PHA or PHA Update:

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures): 30-Sep-2021

Training

Training Revision Date (The date of the most recent review or revision of training programs): 16-Dec-2021

The Type of Training Provided

Classroom: Yes

On the Job: Yes

Other Training: Computer Knowledge-based with testing

The Type of Competency Testing Used

Written Tests: Yes

Oral Tests:

Demonstration: Yes

Observation: Yes

Other Type of Competency Testing Used:

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures): 01-Oct-2021

Equipment Inspection Date (The date of the most recent equipment inspection or test): 08-Feb-2022

Equipment Tested (Equipment most recently inspected or tested): AP162; 8R3 Rupture Disk Pressure

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures): 12-Jan-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures): 12-Feb-2022

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review): 05-Nov-2021

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit): 01-Mar-2022

Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit): 01-Mar-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)): 04-Jan-2022

Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation): 30-Jun-2022

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans): 11-Mar-2022

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures): 01-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures): 31-Dec-2019

Contractor Safety Performance Evaluation Date
(The date of the most recent review or revision of
contractor safety performance):

07-Jan-2020

Confidential Business Information

CBI Claimed:

Description

Three EPA listed substances are contained in this Unit, HCl (used), Mixed C4 flammables, mainly Butanes (used), and ammonia (cooling). There is a HCl delivery system, a self-contained ammonia refrigeration system and a production system. Although this process is considered a single Unit, separate PHAs are conducted for each system. The HAZOP for the HCl system was completed 7/2018. The HAZOP for the Ammonia Refrigeration system was completed 12/2018. The HAZOP for the production system was completed 11/26/19.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000134234
Chemical Name:	Hydrogen chloride (anhydrous) [Hydrochloric acid]
Flammable/Toxic:	Toxic
CAS Number:	7647-01-0

Process ID:	1000124389
Description:	Vistanex J
Prevention Program Level 3 ID:	1000107191
NAICS Code:	325998

Prevention Program Chemical ID:	1000134232
Chemical Name:	Ammonia (anhydrous)
Flammable/Toxic:	Toxic
CAS Number:	7664-41-7

Process ID:	1000124389
Description:	Vistanex J
Prevention Program Level 3 ID:	1000107191
NAICS Code:	325998

Prevention Program Chemical ID:	1000134233
Chemical Name:	Flammable Mixture
Flammable/Toxic:	Flammable
CAS Number:	00-11-11

Process ID:	1000124389
Description:	Vistanex J
Prevention Program Level 3 ID:	1000107191
NAICS Code:	325998

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	26-Nov-2019
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Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	26-Nov-2019
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The Technique Used

What If:
Checklist:
What If/Checklist:
HAZOP: Yes
Failure Mode and Effects Analysis:
Fault Tree Analysis:
Other Technique Used:
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update): 31-Dec-2024

Major Hazards Identified

Toxic Release: Yes
Fire: Yes
Explosion: Yes
Runaway Reaction: Yes
Polymerization: Yes
Overpressurization: Yes
Corrosion: Yes
Overfilling: Yes
Contamination: Yes
Equipment Failure: Yes
Loss of Cooling, Heating, Electricity, Instrument Air: Yes
Earthquake:
Floods (Flood Plain):
Tornado:
Hurricanes:
Other Major Hazard Identified:

Process Controls in Use

Vents: Yes
Relief Valves: Yes
Check Valves: Yes
Scrubbers: Yes
Flares: Yes
Manual Shutoffs: Yes
Automatic Shutoffs: Yes
Interlocks: Yes
Alarms and Procedures: Yes
Keyed Bypass: Yes
Emergency Air Supply: Yes
Emergency Power: Yes
Backup Pump:
Grounding Equipment: Yes
Inhibitor Addition:
Rupture Disks: Yes
Excess Flow Device: Yes
Quench System: Yes
Purge System:
None:
Other Process Control in Use:

Mitigation Systems in Use

Sprinkler System:

Dikes:

Fire Walls:

Blast Walls:

Deluge System:

Yes

Water Curtain:

Enclosure:

Neutralization:

None:

Other Mitigation System in Use:

Firewater Sprays

Monitoring/Detection Systems in Use

Process Area Detectors:

Yes

Perimeter Monitors:

Yes

None:

Other Monitoring/Detection System in Use:

Changes Since Last PHA Update

Reduction in Chemical Inventory:

Increase in Chemical Inventory:

Change Process Parameters:

Installation of Process Controls:

Installation of Process Detection Systems:

Installation of Perimeter Monitoring Systems:

Installation of Mitigation Systems:

None Recommended:

None:

Other Changes Since Last PHA or PHA Update:

Improved materials of construction; upgrade HCl valves.

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):

30-Sep-2021

Training

Training Revision Date (The date of the most recent review or revision of training programs):

06-Feb-2021

The Type of Training Provided

Classroom:

Yes

On the Job:

Yes

Other Training:

Computer - Knowledge based

The Type of Competency Testing Used

Written Tests:	Yes
Oral Tests:	
Demonstration:	Yes
Observation:	Yes
Other Type of Competency Testing Used:	

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures): 29-Jun-2021

Equipment Inspection Date (The date of the most recent equipment inspection or test): 18-Feb-2022

Equipment Tested (Equipment most recently inspected or tested): LA030; C3 Ammonia Detector

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures): 18-Jan-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures): 21-Feb-2022

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review): 18-Oct-2021

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit): 01-Mar-2022

Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit): 31-Dec-2023

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)): 08-Jan-2022

Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation): 30-Mar-2022

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans): 11-Mar-2020

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures): 01-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures): 31-Dec-2019

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance): 07-Jan-2020

Confidential Business Information

CBI Claimed:

Description

LOFI. One EPA listed substance is contained in this Unit, Vinyl Acetate (used). This process is considered a single Unit.

Program Level 3 Prevention Program Chemicals

Prevention Program Chemical ID:	1000134235
Chemical Name:	Vinyl acetate monomer [Acetic acid ethenyl ester]
Flammable/Toxic:	Toxic
CAS Number:	108-05-4
Process ID:	1000124390
Description:	LOFI
Prevention Program Level 3 ID:	1000107192
NAICS Code:	325998

Safety Information

Safety Review Date (The date on which the safety information was last reviewed or revised):	04-Nov-2021
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Process Hazard Analysis (PHA)

PHA Completion Date (Date of last PHA or PHA update):	04-Nov-2021
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The Technique Used

What If:	
Checklist:	
What If/Checklist:	
HAZOP:	Yes
Failure Mode and Effects Analysis:	
Fault Tree Analysis:	
Other Technique Used:	
PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update):	10-Jan-2024

Major Hazards Identified

Toxic Release:	Yes
Fire:	Yes
Explosion:	
Runaway Reaction:	
Polymerization:	
Overpressurization:	Yes
Corrosion:	
Overfilling:	Yes
Contamination:	
Equipment Failure:	Yes
Loss of Cooling, Heating, Electricity, Instrument Air:	Yes
Earthquake:	

Floods (Flood Plain):

Tornado:

Hurricanes:

Other Major Hazard Identified:

Process Controls in Use

Vents:	Yes
Relief Valves:	Yes
Check Valves:	Yes
Scrubbers:	
Flares:	
Manual Shutoffs:	Yes
Automatic Shutoffs:	Yes
Interlocks:	Yes
Alarms and Procedures:	Yes
Keyed Bypass:	
Emergency Air Supply:	Yes
Emergency Power:	Yes
Backup Pump:	
Grounding Equipment:	Yes
Inhibitor Addition:	
Rupture Disks:	Yes
Excess Flow Device:	
Quench System:	
Purge System:	
None:	
Other Process Control in Use:	Thermal Oxidizer

Mitigation Systems in Use

Sprinkler System:	
Dikes:	Yes
Fire Walls:	
Blast Walls:	
Deluge System:	
Water Curtain:	
Enclosure:	
Neutralization:	
None:	
Other Mitigation System in Use:	

Monitoring/Detection Systems in Use

Process Area Detectors:	
Perimeter Monitors:	
None:	Yes
Other Monitoring/Detection System in Use:	

Changes Since Last PHA Update

Reduction in Chemical Inventory:	
Increase in Chemical Inventory:	
Change Process Parameters:	
Installation of Process Controls:	

Installation of Process Detection Systems:
Installation of Perimeter Monitoring Systems:
Installation of Mitigation Systems:
None Recommended:
None: Yes
Other Changes Since Last PHA or PHA Update:

Review of Operating Procedures

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures): 30-Jun-2021

Training

Training Revision Date (The date of the most recent review or revision of training programs): 16-Dec-2021

The Type of Training Provided

Classroom: Yes
On the Job: Yes
Other Training: Computer - Knowledge based

The Type of Competency Testing Used

Written Tests: Yes
Oral Tests:
Demonstration: Yes
Observation: Yes
Other Type of Competency Testing Used:

Maintenance

Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures): 01-Apr-2020

Equipment Inspection Date (The date of the most recent equipment inspection or test): 05-Jan-2022

Equipment Tested (Equipment most recently inspected or tested): FF061; 7P61 Low Flow Cutout

Management of Change

Change Management Date (The date of the most recent change that triggered management of change procedures): 22-Mar-2022

Change Management Revision Date (The date of the most recent review or revision of management of change procedures): 12-Feb-2022

Pre-Startup Review

Pre-Startup Review Date (The date of the most recent pre-startup review): 19-Mar-2021

Compliance Audits

Compliance Audit Date (The date of the most recent compliance audit): 01-Mar-2022

Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit): 01-Mar-2022

Incident Investigation

Incident Investigation Date (The date of the most recent incident investigation (if any)): 24-Jun-2015

Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation): 31-Dec-2015

Employee Participation Plans

Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans): 11-Mar-2020

Hot Work Permit Procedures

Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures): 01-Mar-2022

Contractor Safety Procedures

Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures): 31-Dec-2019

Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance): 07-Jan-2020

Confidential Business Information

CBI Claimed:

Section 8. Program Level 2

No records found.

Section 9. Emergency Response

Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?): Yes

Facility Plan (Does facility have its own written emergency response plan?): Yes

Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?): Yes

Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?): Yes

Healthcare (Does facility's ER plan include information on emergency health care?): Yes

Emergency Response Review

Review Date (Date of most recent review or update of facility's ER plan): 15-Dec-2021

Emergency Response Training

Training Date (Date of most recent review or update of facility's employees): 15-Dec-2021

Local Agency

Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated): Linden City LEPC

Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated): (908) 474-8500

Subject to

OSHA Regulations at 29 CFR 1910.38: Yes

OSHA Regulations at 29 CFR 1910.120: Yes

Clean Water Regulations at 40 CFR 112: Yes

RCRA Regulations at CFR 264, 265, and 279.52: Yes

OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254: Yes

State EPCRA Rules or Laws: Yes

Other (Specify): New Jersey Toxic Catastrophe Prevention Act

Executive Summary

Executive Summary

Risk Management Plan

Infineum USA L.P. Bayway Chemical Plant

This is a re-submission of the RMP with all sections updated and certified.

Changes to the RMP since the last resubmission of April 2020 include: (i) Revised in this Executive Summary {a} section "Emergency Response Program" one Shift Team Leader retired and one new Shift Team Leader was added to the Bayway Chemical Plant Operations Team. The total number of Shift Team Leaders remains at Twelve. The Shift Team Leader who retired was the designated Emergency Contact under Section I. Registration Information, Sub-section 1.8 Emergency Contact. A new Emergency Contact has been designated and is shown in the RMP, {b} section "Recent Changes to Improve Safety", {1} updated date of the most recent Detailed fire protection survey, {2} added an additional layer of protection to the plant in the form of SIL instrumentation, {3} added an additional layer of protection to the plant in the form of performing LDAR like monitoring of strategic locations on Ammonia lines; {c} general clean-up of wording and simplifying verbiage; (ii) In Section I. Registration Information, Sub-section 1.7 Name, title and email address of person or position responsible for RMP (part 68) implementation, the person and position responsible for RMP (part 68) implementation has been changed; (iii) Rewording section labeled, "General Accidental Release Prevention Program" as the Lloyd's Register quality Assurance (LRAQ) review was updated in 2020; (iv) Section 3. Toxics: Alternative Release, updated dispersion modeling using the most recent version of PHAST, version 8.61. Only change was in scenario for LOFI; (v) Section 7: Prevention Program: Program Level 3, brought all information up to date.

There were no significant changes to the management system since the last RMP update.

Accidental Release Prevention and Response Policies

The Infineum USA L.P. Bayway Chemical Plant (BWCP) has had a long-standing commitment to protecting their colleagues (employees), the public, and the environment. This commitment is demonstrated by the resources invested in accident prevention such as: providing comprehensive initial and refresher personnel training, considering safety in the design, installation, operation, inspection, and maintenance of our processes, and conducting drills to respond to simulated emergencies. Our objective is to implement controls to minimize the potential for releases. However, our trained personnel will respond to mitigate any release that may occur including controlling and containing that release.

We prevent accidents using a structured safety management system entitled, Operations Integrity Management Systems (OIMS), and a Total Safety Culture (TSC) in which all colleagues and contractors play a role. OIMS are the cornerstone for continuous improvement in our safety-related systems. These systems are evergreen and are in a continuous state of improvement, usually through many small steps. Some examples are the recommendations from our hazard and risk reviews and any incident investigations.

The BWCP remains an American Chemical Council Responsible Care facility for its effective safety and health management programs.

Description of the Stationary Source and Regulated Substances

The Infineum BWCP, located in Linden, N. J., operates several processes to produce additives for engine oils and transmission fluids. While the additive products are not regulated as hazardous by the EPA, some of the raw materials are regulated as toxic or flammable under the EPA. Our regulated toxic materials are Anhydrous Ammonia, Chlorine, Hydrogen Chloride, and Vinyl Acetate. Our regulated flammable material is mixed C4 hydrocarbons (n butane and Butenes).

General Accidental Release Prevention Program

The BWCP uses OIMS, a system developed by ExxonMobil Chemical Company in 1992 which covers all aspects of our operations that could affect the safety or health of our colleagues or public neighbors. Even after the BWCP became part of a new company, Infineum, in 1999, OIMS continues to be used as the formal Operations Integrity System. In 2020, Lloyd's Register Quality Assurance (LRQA) reviewed the practice of the site OIMS and evaluated it against the international standard for Environmental

Management Systems (ISO 14001). After an extensive review, Lloyd's certified the Bayway site as RC 14001, a combination of Responsible Care as well as ISO 14001 dual certification.

The OIMS system meets all the requirements of the Federal Chemical Accident Prevention rules at 40 CFR Part 68 (EPA RMP), the Occupational Safety and Health Administration Process Safety Management Standard 29 CFR 1919.119 (OSHA Process Safety Management of Highly Hazardous Chemicals) and the New Jersey Toxic Catastrophe Prevention Act N.J.A.C. 7:31 (NJ TCPA). The system also exceeds all regulatory requirements by incorporating periodic management review of performance measurements for each practice to evaluate how each is working per plan and what improvements might be made. The Infineum BWCP is a member of the Chlorine Institute and the American Chemical Council Responsible Care program.

Each of the EPA areas is described in greater detail below and in the Data Element Section. Due to the ongoing nature of our safety program, the dates associated with the various activities in our accident prevention program are constantly being updated.

Employee Participation

Infineum encourages colleagues to participate in all facets of process safety management and accident prevention. An annual plan is developed for colleague participation. This includes weekly safety meetings for operations and maintenance personnel, weekly safety audits, meetings of the Operations Integrity Committee (OIC) and site-wide, full day, interactive safety workshops. Infineum also conducts Health, Safety, Security and Environmental (HSSE) training days for process and mechanical colleagues on an annual basis. Colleagues also participate in the development and updating of operating and maintenance procedures and conducting Process Hazard Analyses (PHA). PHA results are available to all colleagues and follow-up items are stewarded by the Business Unit Leader.

The OIC is the final review on "safety" matters relating to facilities and operations. "Safety," in the current environment, encompasses a broad range of issues. Not only is it necessary to provide for the well-being of the plant workers and equipment, but also to protect the community from any harm potentially resulting from an in-plant accident. The role and objectives of the OIC recognize this broader involvement.

The general objectives of the OIC are as follows:

- * Help anticipate hazards and work with operations to avoid them.
- * Promote improvements in "safety" matters throughout the plant.
- * Help develop and maintain a realistic and credible plant wide HSSE policy that reflects this broader definition.
- * Monitor and provide continuity for HSSE standards and procedures and monitor progress in plant programs aimed at a more secure workplace. These standards consist of the applicable codes and industry standards (e.g., ASME, API, NFPA, Chlorine Institute) as well as ExxonMobil's Design Practices, ExxonMobil's Global Practices, and Mechanical Standards.

Colleague participation is further amplified in the Operations Integrity Advisory Committee (OIAC). This safety committee meets monthly and is represented by experienced colleagues in management and labor areas. The Plant Manager and Union Labor executive committee member co-chair the OIAC, which focuses on HSSE programs and systems including security. Key HSSE personnel are included in the monthly agenda to report on on-going programs and initiatives.

Process Safety Information (PSI)

The Infineum BWCP keeps a variety of technical documents that are used to help maintain safe operation of the processes. These documents address chemical properties and associated hazards, limits for key process parameters, specific chemical inventories, equipment design basis, and equipment configuration information. Specific groups within the plant are assigned responsibility to ensure the information is up to date.

Chemical-specific information, including exposure hazards and emergency response/exposure treatment considerations, is provided in safety data sheets (SDS). In general, PSI is maintained in, or the location where they can be found is given in, the unit Process Control Standards (PCS) and the Documentation Plan (an element of the NJDEP TCPA program).

The plant also maintains numerous technical documents that provide information about the design and construction of process equipment including materials of construction, design pressure and temperature ratings, and electrical rating of equipment. When

combined with written procedures and trained personnel, this information provides a basis for establishing inspection and maintenance activities. This information is also used in evaluating proposed process and facility changes to ensure that safety features in the process are not compromised.

Process Hazard Analysis (PHA)

The Infineum BWCP has a comprehensive program of PHAs. Within this program each process is systematically examined to identify and understand hazards and ensure that adequate controls are in place to manage the hazards.

The Infineum BWCP performs major PHAs in the form of a Hazard and Operability (HAZOP) study using the industry-wide standard Guideword HAZOP methodology. HAZOP studies are widely recognized as one of the most systematic and thorough types of PHAs. The studies are conducted using a team of people who have operating experience and engineering expertise on the process to be evaluated. This PHA team identifies and evaluates hazards of the process as well as accident prevention and mitigation measures. The team also makes suggestions for additional prevention and/or mitigation measures when necessary.

The PHA findings and any resulting follow up items are provided to the processing Unit management. Resolution of follow up items is prioritized based on the relative risk evaluation performed by the PHA team. Potential hazard scenarios with the greater assigned risk receive attention first. All PHA follow up items are tracked until they are resolved. The PHA findings and any resulting follow up items and their resolutions are documented and retained for the life of the process.

The plant updates and revalidates the PHA for each covered process, including the Flare System every five years.

Inherently Safer Technology (IST) Reviews

As an element of the NJDEP TCPA program, Inherently Safer Technology reviews are an integral element of the Health, Safety, Security, Environmental (HSSE) program at the BWCP. Major new projects are reviewed at early stages to ensure that inherently safe technology concepts have been incorporated during project development. Projects are then reviewed at the more detailed stages to incorporate inherently safer improvements that reduce the risk of potential hazardous incidents. To comply with the Best Practices Standards at TCPA/DPCC Chemical Sector Facilities, November 21, 2005, the site performed and completed an initial IST review of the TCPA covered facilities, which incorporates all the EPA covered facilities as well, and which were then reviewed and approved by NJDEP in March 2006. The site submitted the IST reviews to NJDEP in August 2008 to comply with N.J.A.C. 7:31-4.12 (a). Updates to the initial reviews are performed in conjunction with PHA revalidation cycles.

Operating Procedures

The BWCP maintains written procedures that address various modes of process operations, such as startup, shutdown, normal, and emergency operations. These procedures can be used as a reference by experienced operators, and they provide a consistent basis for training new operators. These procedures are periodically reviewed and annually certified as current and accurate. The procedures are maintained current and accurate by revising them as necessary to reflect changes made through the management of change system.

The BWCP has identified critical safe operating limits for process parameters such as temperature, pressure, levels, and compositions. This information, along with written operating procedures is readily available to operators in the process and to other personnel to use as necessary to safely perform their job tasks.

Hot Work and Safe Work Practices

The BWCP has long-standing safe work practices in place to help ensure worker and process safety. All safe work practices are contained in the site Health, Safety and Environmental Manual that is available electronically from every personal computer. Examples of safe work practices include energy isolation for equipment being worked on (Lockout/Tagout), procedures for the safe removal of hazardous materials before opening process piping/equipment (work permit), hot work permit/procedure to safely manage spark-producing activities, vehicle entry into process areas, confined space entry permit/procedure, and job safety analyses to identify and mitigate hazards associated with maintenance tasks. These practices (and others), along with training, form a system to help ensure that operations and maintenance activities are performed safely. Unit-specific safe work practices are

in the Unit standard operating manuals (SOPs), which are available electronically.

Training

The BWCP has implemented comprehensive training for all colleagues involved in operating a process. The initial training for new hire Process Technicians (PT) is done in 2 Phases. Phase 1 - Orientation, is done in a classroom setting with emphasis on topics from the HSSE Manual. Phase 2 - Field Training with Mentor, is on-the-job with emphasis on Process unit manuals and procedures. New hire PTs complete both Phases while PTs who are just newly assigned to a different Unit Post complete only Phase 2. All PTs are trained to the 24-hr Hazmat technician level.

Following Orientation and whenever a newly assigned PT begins training on a new Unit Post, the trainee PT is assigned a qualified PT (Mentor) who provides on-the-job training of the SOPs for the assigned Post. Each Process Post has a curriculum of online Knowledge Tests and Job Performance Measures (JPMs) that must be completed by each PT trainee prior to the final evaluation, which is an oral field walk-thru by Unit supervision. Successful completion of all requirements results in awarding a Final Qualification certificate.

Process Technician refresher training is documented for each PT and consists of classroom training (annual), and Unit-specific training (1 to 3 years). HSSE Day (annual classroom) serves as the annual Hazmat technician refresher training as well as a general safety refresher of Job Safety Analysis, Hazcom, SPCC/DPCC, Work Permits, Confined Space, Energy Isolation, Hearing Conservation, PPE, Access to Medical Records, Fall Protection, and Fire Safety. Unit-specific refresher training consists of online knowledge tests that cover standard operating, critical, and emergency procedures. Refresher test cycle varies according to topic and ranges from 1 to 3 years. Respirator Fit testing, Air Purified Respirator (APR) and SCBA refresher training are done on an annual basis in the field in a separate training session.

Contractors

Work performed by contractors at Bayway is managed consistently with and is a part of the overall OIMS. Contractors are required to utilize the same procedures to perform work as Infineum colleagues. These procedures are documented in the HSE manual. Contractor administration procedures are developed, coordinated, and implemented by the Plant's Contractor Administration Team (CAT), which is made up of representatives from Safety, Training, Maintenance, Projects, Operations, Purchasing, and representatives from the contractor's workforce.

Contractor Administration begins with the Contractor Selection Procedure. The procedure includes an annual qualification of contractors by the CAT that allows specific contractors to be considered for work. This process includes a review of the Contractor's Safety Program as well as the Contractor's safety performance. The review team also evaluates the Contractor's past performance in meeting training requirements, the effectiveness of their ongoing program to promote HSE awareness, and general feedback on work performance including input from the Bayway Safety Survey system.

It has been the practice at Bayway to use union trained labor where craft skills are required. Selected Contractors must then have agreements to utilize trained and qualified union labor that have received their craft training in state certified union craft training programs.

Specific training for the individual contract worker is accomplished by a twofold approach of Contractor training and Owner Orientation.

The Contractor, utilizing information provided by Bayway via the contract exhibit F, "Safety and Health Administrative Instructions for Contractors" and the HSE manual, inform, train, and evaluate each employee. This training information includes familiarization with the hazards of regulated substances found at the BWCP and the Emergency Response Plan. Work procedures as prescribed by the HSE manual (e.g., Work Permit System) are also covered. The Contractor employees are also requested to advise the appropriate Infineum colleague of any unique hazards provided by their work or any hazards that they find while working. The expected method for this communication is the Work Permit System. In the [rare] occasion that a Contractor employee performs work within the Preventive Maintenance Program, the Contractor is also required to train, inform, and evaluate their employee on this system.

Prior to beginning work in the plant, the Contractor employee must successfully complete the Bayway Safety Health Administrative Instruction for Contractors (SHAIC) training, which is the Owner's safety orientation session. The SHAIC training is administered by the Plant contract coordinators. SHAIC training includes but is not limited to:

- * Information on EHS and other plant hazards
- * Plant Emergency Response and evacuation plan
- * Work Permit System
- * Alcohol and Drug Policy
- * Other Infineum Chemical rules and regulations

Pre-startup Safety Reviews (PSSR)

The BWCP conducts a PSSR for any project that introduces a new facility or modifies an existing one where Process Safety Information is revised. The purpose of the PSSR is to ensure that safety features, procedures, and the equipment are appropriately prepared for startup and personnel are trained prior to placing the equipment in service. This review procedure provides one additional check to make sure construction is in accordance with the approved Management of Change and that all supporting systems is operationally ready. PSSRs are also conducted on field changes as part of the Management of Change process when PSI is revised. The PSSR review team uses checklists to verify all aspects of readiness.

Mechanical Integrity/Preventative Maintenance

The Bayway Preventive Maintenance and Inspection Program is centered on a computer data base and software called SAP R3. The computer contains technical data on piping, fixed equipment, machinery, pressure relief devices, and instrumentation and specifies the preventive maintenance frequencies and procedures required for each individual piece of equipment. Equipment breakdown and repair history are also recorded. Some older historical records will remain in a paper-based file.

Fixed equipment inspection intervals for all equipment are developed on a systematic basis that includes historical data and current non-destructive inspection results. A quarterly inspection planning report is generated showing the equipment that is scheduled for inspection during the current year and what has not yet been completed.

The fixed equipment inspection techniques in use comply with our own standards and applicable industry standards. Inspectors are API 510, 570, and 653 certified, and attend outside training courses to facilitate the implementation of new technology. The inspection program ensures that all the requirements necessary for approvals by the various code agencies and the National Board are maintained.

Pressure relief devices such as safety relief valves, rupture disks, pressure/vacuum vents and instrumentation systems designated as critical for either safety or environmental purposes are handled similarly in the SAP R3 system. The intervals between inspections of these devices are set based on criticality of service and analysis of the historical data. The list of safety and environmentally critical instrumentation is periodically reviewed to ensure effective coverage. Monthly reports are generated showing the status of equipment that is scheduled for inspection that month and year-to-date, and any equipment whose inspection may be overdue.

Semiannual HSSE metrics for each operating area are reviewed with the BWCP Site Operations Integrity Committee (SOIC). Included is a review of the status of PM completions and fixed equipment inspections.

A procedure is in place that requires Management of Change, with Plant Manager's approval to defer an inspection beyond the scheduled date.

Another integral part of the mechanical integrity program is quality assurance. The BWCP incorporates quality assurance measures into equipment purchases and repairs. This helps ensure that new equipment is suitable for its intended use and that proper materials and spare parts are used when repairs are made.

Management of Change (MOC)

The BWCP has a comprehensive system to manage changes to operations, procedures, internal standards, facilities, and

personnel. This system requires that changes are reviewed to ensure that adequate controls are in place to manage any new hazards and/or to verify that existing controls have not been compromised by the change and that these changes are properly authorized. This system also ensures Process Safety Information (PSI) are updated when incorporated into these changes. In addition, the system ensures that operating and maintenance personnel are provided with any necessary training before the change is implemented.

Incident Investigation

The BWCP investigates all Safety and Environmental incidents. The goal of each investigation is to determine the root cause and develop corrective actions to prevent a recurrence of the incident, or a similar one. All incident reports are documented and reviewed by the Production Manager and relevant Business Unit Leader. Corrective actions taken in response to the investigation are tracked to completion. Investigation results are reviewed with colleagues and Contract employees who could be affected by the findings. Reports are retained for at least five years and are reviewed during relevant PHAs.

Compliance Audits

The BWCP periodically conducts an audit of the accident prevention program and the OIMS to determine whether the procedures and practices of the program are being utilized and are effective. Self-audits are conducted quarterly, and internal audits may be conducted on an annual basis. Every four years the BWCP undergoes an extensive, external audit made up of both Infineum colleagues from other sites and ExxonMobil colleagues. Findings, including follow up items are provided to Plant Management. Corrective actions taken in response to the findings are tracked to completion and documented. Reports from at least the two most recent audits are retained.

Chemical Specific Prevention Steps

The accidental release prevention program described above applies to all facilities at our plant, not just those covered by the EPA and NJDEP TCPA. Collectively, this program helps prevent or mitigate hazard scenarios that could be caused by equipment failures, human errors, facility siting issues or external events.

In addition, specific features are incorporated in each Unit process to prevent or mitigate the release of toxic or flammable substances. The following features are among those used for specific processes.

- * Process relief valves and rupture disks that vent to a flare system or a scrubber
- * Excess Flow Check Valves
- * Scrubber to neutralize byproducts such as HCl
- * Flammable gas detectors with alarms for mixed C4 hydrocarbons
- * Toxic gas detectors with alarms for hydrogen sulfide (a NJDEP TCPA covered substance), chlorine, hydrogen chloride, and ammonia
- * Automatically operated and manual valves to isolate and stop a leak
- * To help minimize human error, Infineum has adopted the concepts in the program, "Science of Human Error Reduction"
- * Computer control that automatically stops the process when high temperatures or pressures are detected (Independent and redundant systems)
- * Curbing and diking to contain liquid leaks
- * Procedures to check for leaks before returning equipment to service after maintenance
- * Deluge system for mixed C4 hydrocarbons and ammonia
- * Emergency response procedures for specific chemicals
- * TV surveillance cameras with pan, tilt and zooming capabilities around the chlorine containment area

Five Year Accident History

The Infineum BWCP has had no releases during the past five years that are reportable under the RMP regulation.

Emergency Response Program

Emergency response at the Bayway site is shared with the neighboring refinery. The site maintains extensive fire-fighting equipment, a command post vehicle, two ambulances, numerous self-contained breathing systems and back-up air supplies, acid suits, rescue equipment, medical supplies, etc. A well-equipped Chemical Plant team is trained to respond to site emergencies as well as transportation emergencies in the community as part of the American Chemistry Council (ACC) Chemnet/Chemtrec Programs. The Site Emergency Manual and the Emergency Response Organization (ERO) manuals are very comprehensive. They include very specific procedures to deal with site-wide emergencies. They also include specific external notification instructions.

Members of both staffs are trained in various phases of emergency response procedures. A separate staff of trained emergency medical technicians is available 24 hours/day and trained medical resources in the Medical Department are staffed about 50 hours/week and available on call 24 hr/day. Arrangements are in force with Trinitas Hospital to provide medical services at other hours.

Periodic meetings are held with the Linden Fire Department (LFD) to coordinate procedures and inform LFD officers about the site. The LFD Commander, who arrives at the site for any emergency, will be escorted to the scene to communicate with the Bayway Incident Commander, give advice and render an independent judgment of the situation.

The Chemical Plant Shift Team Leaders (STLs) oversee any Chemical plant emergencies until operations management arrives. Our STLs have been trained to identify incidents that require agency notifications and have the authority to call out the Chemical Plant Emergency Response Organization (ERO). Assistance is available on-site from the Refinery Shift Superintendent and Refinery emergency resources, if needed. The Chemical Plant Shift Team Leaders are: Ronald Croce (Ronald.Croce@Infineum.com); Carlos Dominguez (Carlos.Dominguez@Infineum.com); Ed Dooling (Ed.Dooling@Infineum.com); Anthony Giano (Anthony.Giano@Infineum.com); Matthew Logan (Matthew.Logan@Infineum.com); Stanley Mozdzen (Stan.Mozdzen@Infineum.com); Daniel Ozdowski (Daniel.Ozdowski@Infineum.com); Vincent Pena (Vincent.Pena@Infineum.com); Mark Peters (Mark.Peters@Infineum.com); Anthony Giano (Anthony.Giano@Infineum.com); James Reid (James.Reid@Infineum.com); Chet Wysocki (Chet.Wysocki@Infineum.com); Brandon Peters (Brandon.Peters@Infineum.com).

The ERO consists of the plant management and senior staff people in Risk Management, Environmental, Technical, Medical, Human Resources, Legal and Personnel Safety. A manual is available to guide this group to the proper agency contacts and it also supplements the material in the site-wide Emergency Manual with additional information specific to chemical accidents. Infineum is a member of the Linden Industrial Mutual Aid Council (LIMAC) through which it can obtain backup material in a major incident.

Special communication systems and procedures are in place and are periodically updated to ensure that accurate information is available to both decision-makers and the public.

Emergency response teams perform annual field exercises. Emergency Preparedness also includes numerous desktop exercises including security, which is an integral part of the site integrity program. In addition, the plant participates in local emergency response planning activities such as the Linden LEPC. Drills and actual emergency call outs are critiqued to further improve our system.

Recent Changes to Improve Safety

Changes that improve safety result from a variety of activities including: Process Hazard Analyses, risk assessments, safety tours, near miss reports, and colleague suggestions. Recently completed changes include:

- * Install new, faster activating automated tank car valve closers on chlorine railcars. (2017)
- * Detailed siting study to implement API RP 752, "Management of Hazards Associated with Location of Process Plant Permanent Buildings" and API RP 753, "Management of Hazards Associated with Location of Process Plant Portable Buildings". (2017)
- * Detailed fire protection survey update. (2021)
- * Inherently safer design for unloading vinyl acetate. (2013)
- * Establishing Thermal Spray Aluminum (TSA) to replace paint as a site standard to control corrosion of carbon steel pipe and equipment (inherently safer than paint). (2013)
- * Elimination of Mixed C3's from the site. (2014)
- * Old style chlorine feed control valves with packing have been changed out to bellows-sealed valves (so called zero-emissions valves) and this will minimize any potential leakage. (2014)

- * Added enhanced surveillance throughout the chlorine rail car area using pan, tilt and zoom cameras operated from the main control house. (2014)
- * Purchased and using an optical gas imaging camera that is designed to detect ammonia leaks. (2016)
- * Replaced original chlorine feed line with a new line coated with Thermal Spray Aluminum to eliminate potential corrosion under insulation. (2017)
- * Replaced copper coiled tubing with Hastelloy Hoses, as recommended by the Chlorine Institute, to connect chlorine rail cars to process piping. (2017)
- * Added ejector to evacuate chlorine unloading lines to prevent emissions during railcar switching. (2018)
- * Construction of a new building with caustic scrubber where two chlorine railcars are staged when connected to the process. This significantly mitigates any significant chlorine release that might occur at the connections. (2019)
- * Construction of a new staging area where up to 4 railcars are enclosed in a restricted access fenced-in area and under camera monitoring. (2019)
- * Purchase and install high-definition camera for flare operation of visible emission monitoring. (2019)
- * Replace older slide gate valves in the ZDDP P2S5 feed system with newer models equipped with inflatable seals to reduce H₂S leaks (a NJDEP TCPA covered substance). (2020)
- * Added LDAR like monitoring from strategic locations on Ammonia lines. (2019)
- * Added Safety Instrumented Systems (SIS) to the Chlorine Unit. (2021)